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ABSTRACT

As part of an effort to assess the academic readiness of incoming students at Cerritos College (CC) in Norwalk, California, a study was conducted of the college's constituency to identify the characteristics of incoming students and to determine the extent to which these characteristics have changed over time. The study utilized data from the college application form and results from California Assessment Program (CAP) tests. Findings from the study included the following: (1) from fall 1985 to fall 1990, approximately one-third of students were under the age of 21, while the median age of students increased from 23 years old to 24; (2) between 1985 and 1990, CC student residence in CC district cities declined from 73% to 59%; (3) in fall 1985, 1,003 (24.1%) of the 4,115 public high school graduates from CC's feeder districts attended CC, compared to 893 (21.8%) of the 4,087 high school graduates in 1990; (3) analysis of CAP test score data for the 3 year period from 1987-88 through 1989-90 showed 12th grade reading test scores in Los Angeles County to be consistently 17-22 percentage points below the statewide mean, while mathematics scores were 19-20 points below the mean; (4) 12th grader's CAP writing scores for Los Angeles County from 1988-89 to 1989-90, were 20-23 percentage points below the statewide mean; (5) CC's own reading, writing, and mathematics assessment instruments for its non-traditional college age students has shown a steady decline in mean scores from fall 1985 through fall 1990; and (6) more CC students are originating from county districts where preparation is lower than in CC's feeder districts. (PAA)

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The Academic Readiness of Incoming Students

Statement of Purpose

Cerritos College currently serves a student population rich in diversity and long-term projections do not indicate any reversal of this trend. As this trend continues, the College will continue to provide instruction and services to students of varying backgrounds, including varying levels of academic preparedness. The purpose of this paper is to examine the academic readiness of our incoming students. To do this, a picture of Cerritos College's constituency must first be developed. What are the characteristics of our incoming students? How have they changed over time?

Student's Age

Utilizing information collected from the college application form, Table 1 displays the changes in student age groupings from Fall 1985 to Fall 1990. From the Fall 1985 semester to the Fall 1990 semester, the median age of students enrolled at Cerritos increased by one year, with a sharp peak in median age noted in the Fall 1989 semester. Roughly one third of the students over this time period have been under 21. Nearly 40% have been between the ages of 21-29 and about one-fourth range in age from 30-49.

Table 1

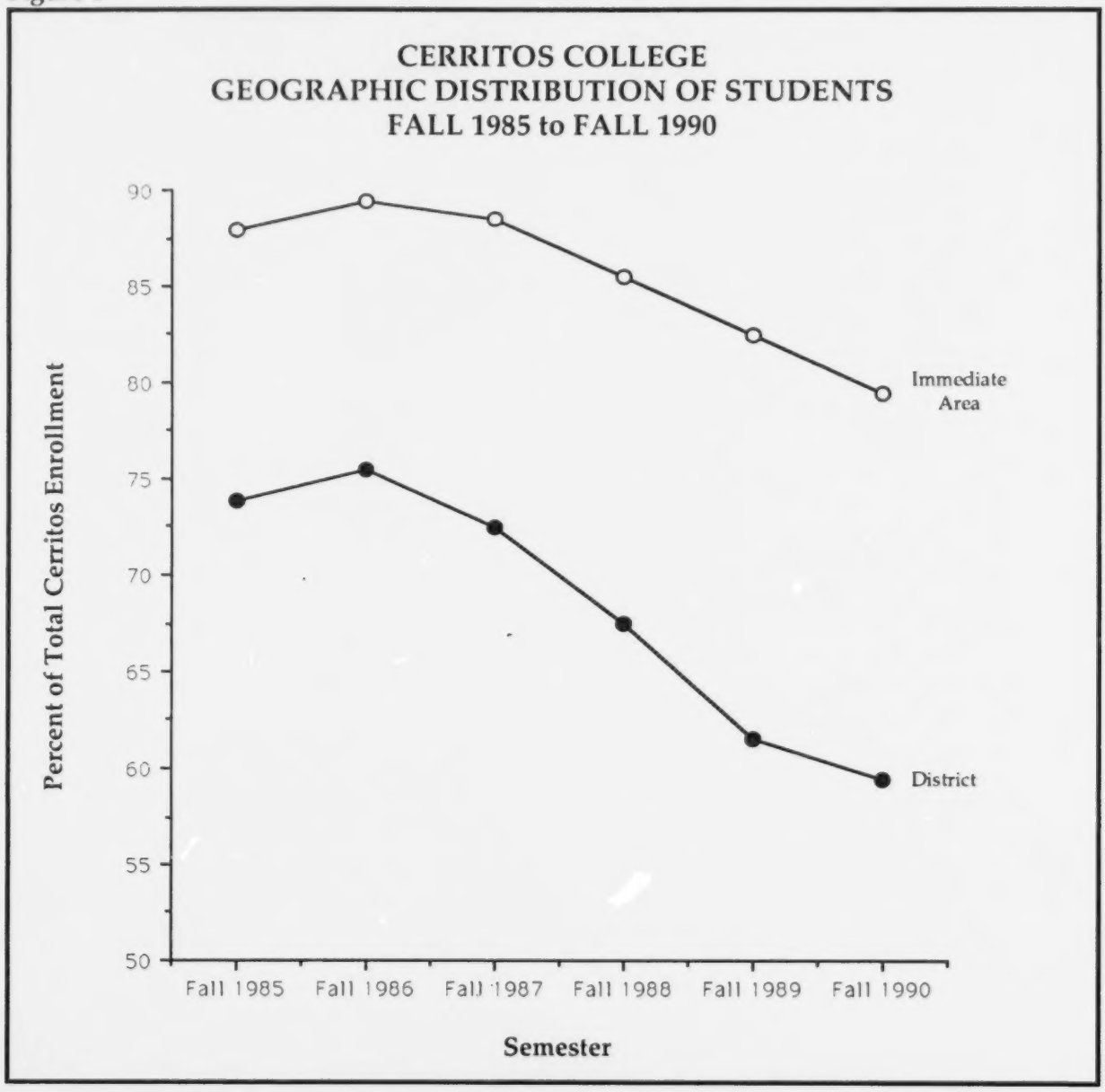
CERRITOS COLLEGE
CHANGE IN AGE RANGE DISTRIBUTION AND MEDIAN AGE
FALL 1985 to FALL 1990

	SEMESTER					
AGE	Fall 85 (N=17,853)	Fall 86 (N=18,640)	Fall 87 (N=18,244)	Fall 88 (N=19,301)	Fall 89 (N=19,961)	Fall 90 (N=20,212)
Under 21	32.9%	30.6%	30.9%	32.0%	32.7%	33.0%
21 to 24	22.6	22.5	21.9	21.0	21.2	20.8
25 to 29	15.7	16.2	16.3	16.4	16.0	15.8
30 to 34	10.1	10.3	10.4	10.1	10.3	10.6
35 to 49	14.8	15.9	16.1	16.2	15.7	15.5
50 or Over	3.9	4.4	4.4	4.3	4.1	4.3
MEDIAN AGE	23.0	24.0	24.0	24.0	24.0	24.0

Student's Residence

Figure 1 below depicts the change in the geographic distribution of Cerritos College student residence from the Fall 1985 (N = 17,853) to the Fall 1990 (N = 20,212) semester. The percentage of students who lived in one of the Cerritos College School District cities (Artesia, Bellflower, Cerritos, Downey, Hawaiian Gardens, Norwalk, Lakewood, and La Mirada) declined steadily from 73% in the Fall 1985 semester to 59% in the Fall 1990 semester. By including additional cities in the immediate College vicinity (Long Beach, Paramount, Pico Rivera, Santa Fe Springs, South Gate, and Whittier), the percentage dropped from 88% in the Fall 1985 semester to 79% in the Fall 1990 semester.

Figure 1



Student's High School of Origin

As the base of students who live in the immediate Cerritos College service area has declined, so has the percentage of students enrolled at Cerritos who graduated from a public feeder school district. Figure 2 shows the trend from Fall 1985 through Fall 1990 in lower public feeder school district graduates who enrolled the following semester at Cerritos College. In Fall 1985, 1,003 of the 4,155 public feeder school district high school graduates (24.1%) attended Cerritos College. Among the 4,087 students in the 1990 public feeder school district graduating class, 893 (21.8%) enrolled at Cerritos College the Fall following their graduation. This total represents 4.0% of the total Fall 1990 semester Cerritos College enrollment and 21.1% of the new students at Cerritos.

Figure 2

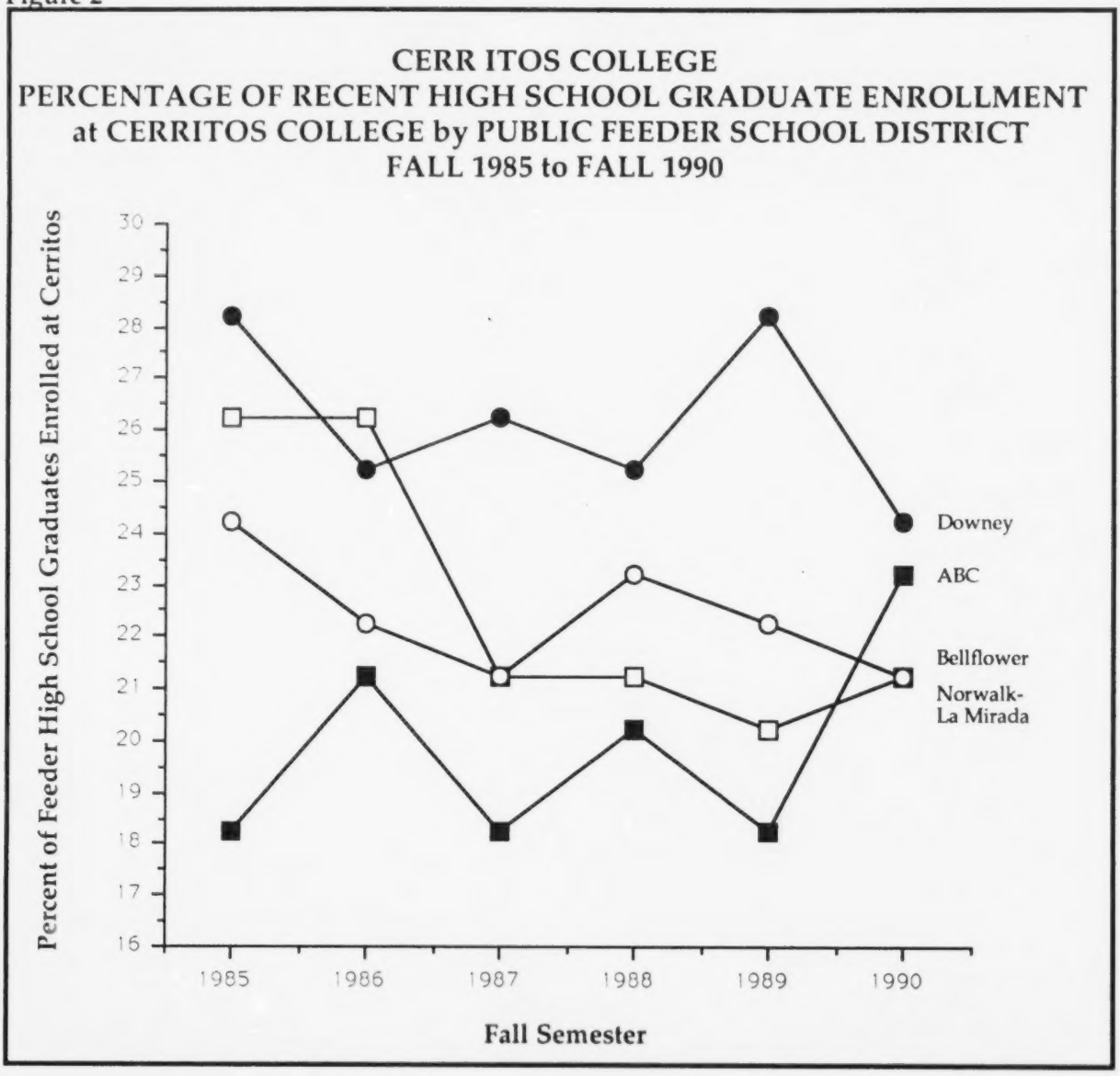
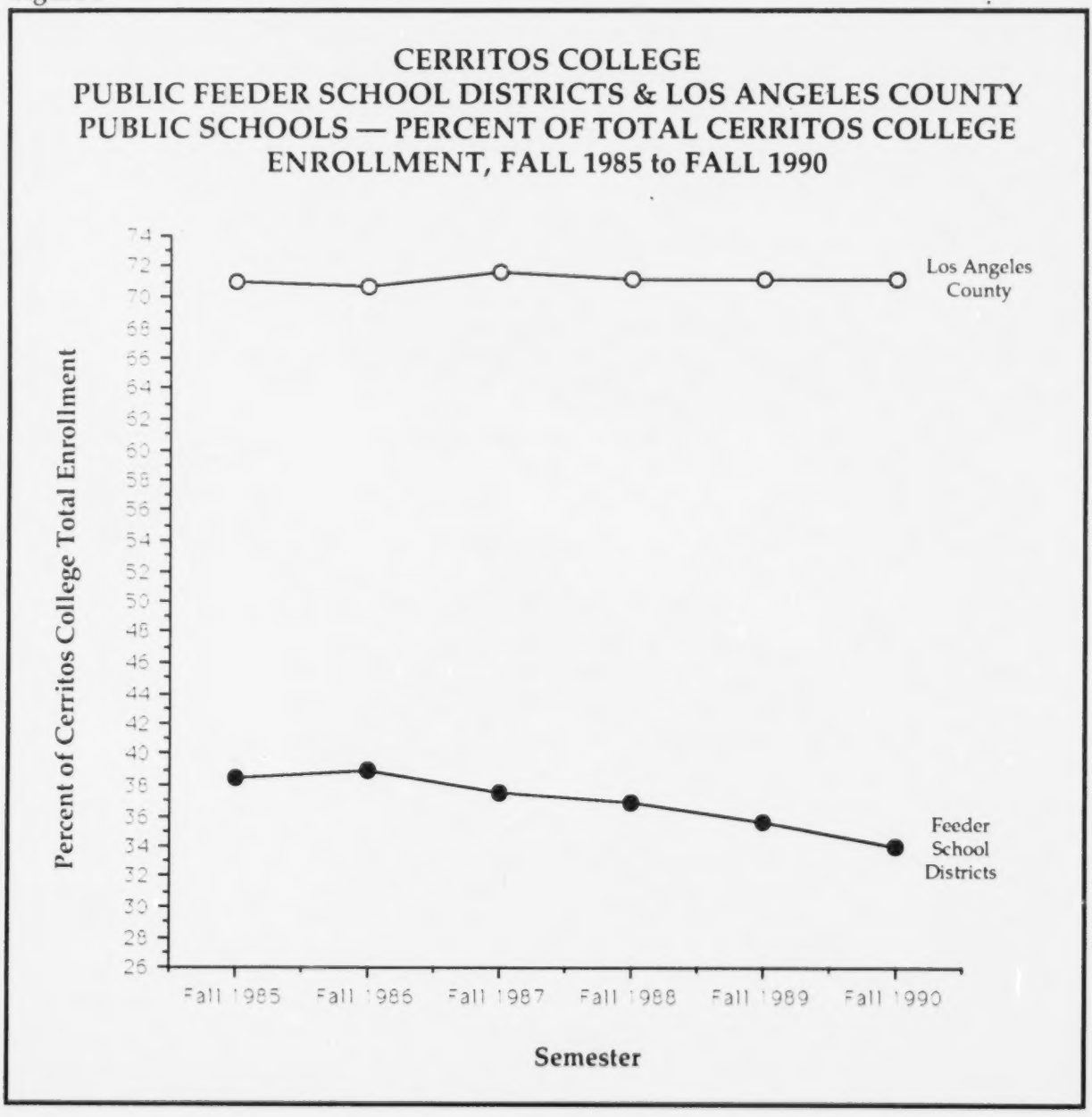


Figure 3 illustrates the change in public feeder school district and Los Angeles County public school enrollment at Cerritos College. Approximately one-third of the students enrolled at Cerritos during the Fall 1990 semester graduated from a public feeder school district high school (N=7,250). Including public feeder school district enrollment, slightly more than 68% of the students enrolled at Cerritos College in the Fall 1990 semester had graduated from a Los Angeles County public high school. This percentage has remained relatively stable over the last five years whereas the percentage from within district feeder schools has dropped somewhat.

Figure 3



While one out of three students enrolled at Cerritos College is a high school graduate from the public feeder school districts, it is noteworthy to examine the proportional mix by public feeder school district. Table 2 illustrates these figures. As the data indicates, the largest proportion of public feeder school district high school graduates attending Cerritos College have traditionally come from the ABC Unified School District, followed by Downey USD. From the Fall 1985 semester to the Fall 1990 semester, the total number of high school graduates from all four public feeder school districts attending Cerritos College has declined.

Table 2

CERRITOS COLLEGE PUBLIC FEEDER SCHOOL DISTRICTS: PERCENT OF TOTAL CERRITOS COLLEGE ENROLLMENT AND TOTAL FEEDER SCHOOL DISTRICT ENROLLMENT AT CERRITOS COLLEGE

	Cerritos College Students from Feeder School District	Percent of Cerritos College Total Enrollment	Proportion of Four Feeder School Districts' Enrollment
Fall 1985			
ABC USD	2,423	12.91	37.04
Bellflower USD	755	4.02	11.54
Downey USD	1,701	9.06	26.01
Norwalk-La Mirada USD	1,662	8.85	25.41
Fall 1986			
ABC USD	2,743	14.00	40.94
Bellflower USD	819	4.18	12.22
Downey USD	1,602	8.17	23.91
Norwalk-La Mirada USD	1,536	7.84	22.93
Fall 1987			
ABC USD	2,289	11.65	35.52
Bellflower USD	782	3.98	12.14
Downey USD	1,794	9.13	27.84
Norwalk-La Mirada USD	1,579	8.03	24.50
Fall 1988			
ABC USD	2,261	10.63	34.26
Bellflower USD	876	4.11	13.27
Downey USD	1,765	8.30	26.75
Norwalk-La Mirada USD	1,697	7.98	25.72
Fall 1989			
ABC USD	2,352	10.80	35.84
Bellflower USD	717	3.29	10.92
Downey USD	1,957	8.99	29.82
Norwalk-La Mirada USD	1,537	7.06	23.42
Fall 1990			
ABC USD	2,342	10.51	36.76
Bellflower USD	887	3.98	13.92
Downey USD	1,586	7.11	24.89
Norwalk-La Mirada USD	1,557	6.98	24.43

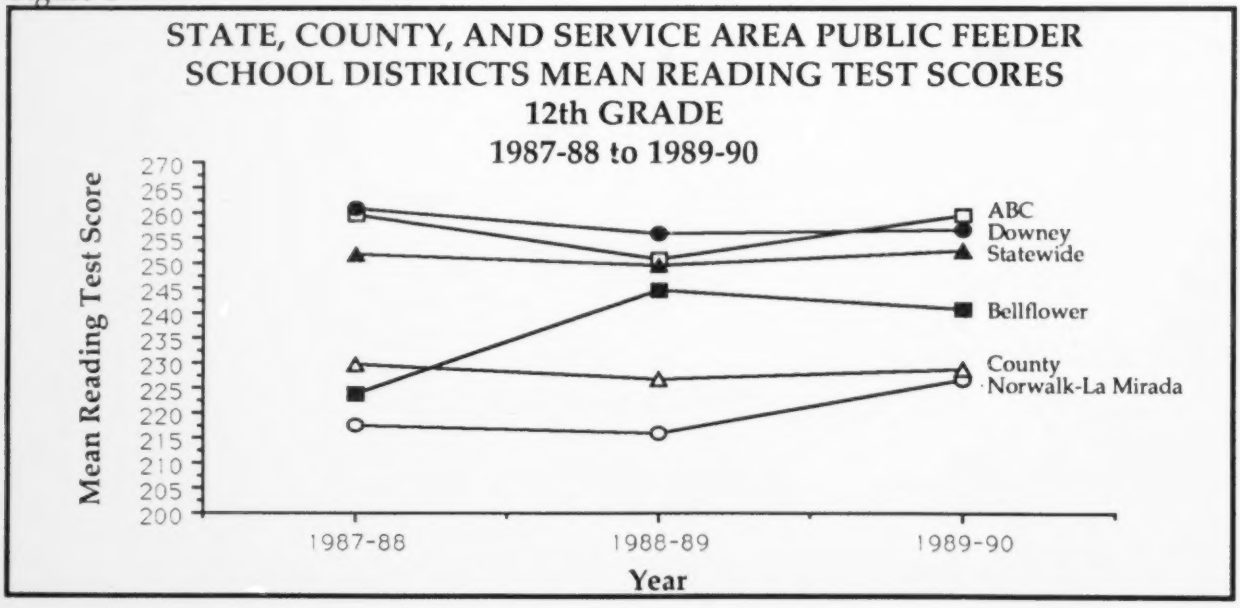
While the median age at Cerritos College has increased slightly, the the largest single age group is still the under 21 population, followed by the 21 to 24 year-old age group. Since Fall 1985, the largest percentage gain has occurred among the 35 to 49 year-old age group. Over this same period, Cerritos College has provided educational opportunities to an increasingly geographically-dispersed population. As this dispersion has increased, fewer Cerritos College students are coming from the public feeder school districts. Approximately one-third of the students enrolled at Cerritos have graduated from one of the four public feeder school districts (ABC, Bellflower, Downey, or Norwalk-La Mirada). However, approximately 70% of the students enrolled at Cerritos College have graduated from a Los Angeles County public high school. This trend is likely to continue. This context must be kept in mind as we examine the limited data that pertains to academic readiness.

Academic Readiness

While California Assessment Program (CAP) data represents the best indicator for providing information on K-12 academic trends, a few caveats must be forwarded regarding the use of test score data. The test-takers emotional, physical, and intellectual condition must be considered, as well as the seriousness of the test-takers approach to testing. Test scores represent only a single index of preparedness; a number of groups (including the California Community College Chancellor's Office) have demonstrated the need for and appropriateness of utilizing multiple measures to provide accurate analysis and information. Regarding CAP data, a number of other extraneous variables (i.e., migration, drop-out, etc.) also exist that might impact its usefulness as an indicator of college academic readiness. Changes in 12th grade CAP testing and scoring have also limited the availability of consistent comparable data. Consistent reading and mathematics CAP scores exist back to the 1987-88 academic school year; in writing, back to 1988-89. It is difficult to infer a trend from two or three years of data.

Figure 4 depicts the change in mean CAP reading scores at the statewide, county, and

Figure 4



public feeder school district level from 1987-88 to 1989-90. Across this three year period, ABC and Downey Unified School District (USD) reading test scores consistently exceeded statewide scores. In 1989-90, ABC and Downey USDs ranked at the 58th and 55th statewide percentile, respectively. The statewide test score reflects the median and is equal to the 50th percentile. From 1987-88 to 1989-90, Bellflower and Norwalk-La Mirada USD reading scores were consistently below the statewide mean test score. In 1989-90, Bellflower (40th percentile) and Norwalk-La Mirada (23rd percentile) USDs ranked below the statewide median. While a statewide relative rank is not computed by county, the mean 12th grade reading test score in Los Angeles County from 1987-88 to 1989-90 was also consistently 17-22 points below the statewide mean reading test score.

Figure 5 below shows the change in mean CAP mathematics scores at the statewide, county, and public feeder school district level from 1987-88 to 1989-90. Trends in public feeder school district and county mathematics scores appear to be similar to reading. Once again, ABC USD consistently exceeded statewide mean test scores, ranking at the 76th statewide percentile in 1989-90. After falling below the statewide mean test score in 1988-89, Downey USD exceeded the statewide mean in 1989-90, ranking at the 52nd percentile. Bellflower and Norwalk-La Mirada USDs mathematics scores were consistently below the statewide mean between 1987-88 and 1989-90. In 1989-90, mean mathematics scores ranked the Norwalk-La Mirada and Bellflower USDs at the 27th and 21st statewide percentiles, respectively. The mean Los Angeles County mathematics test score was consistently 19-20 points below the statewide average.

Figure 5

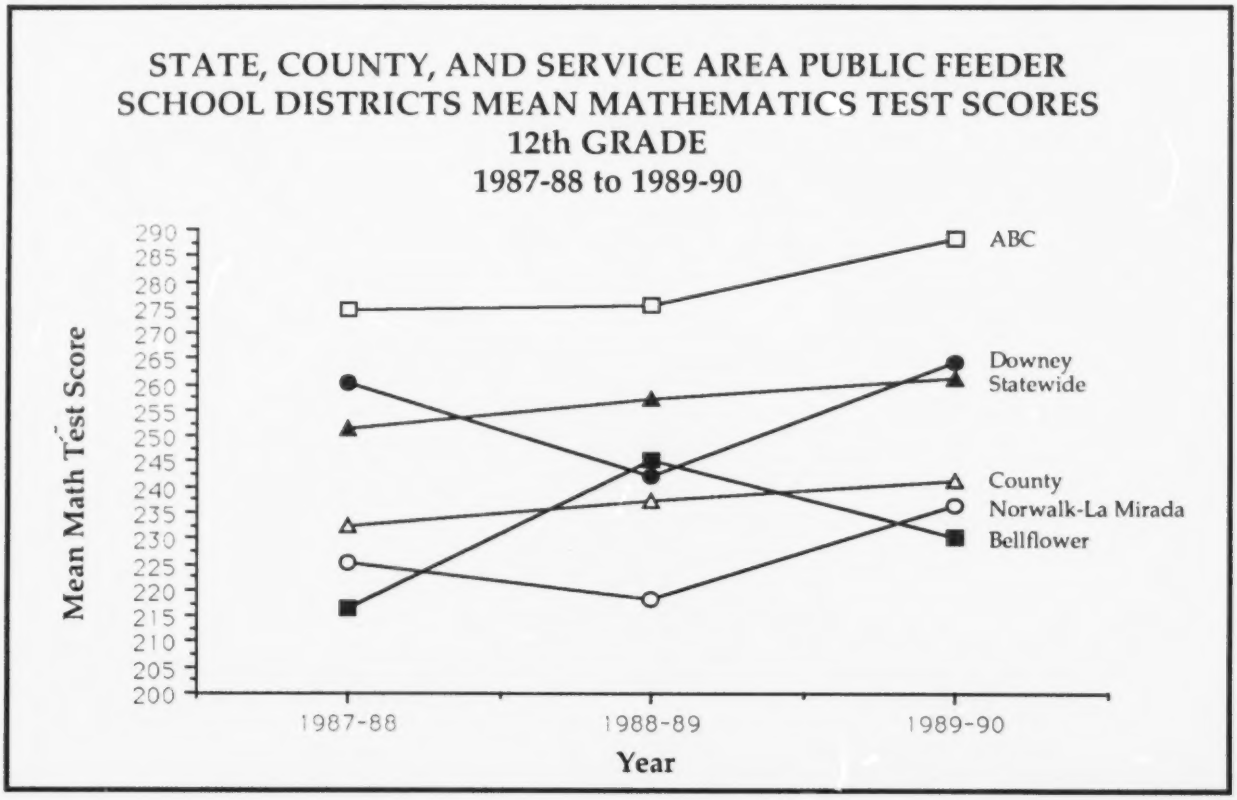
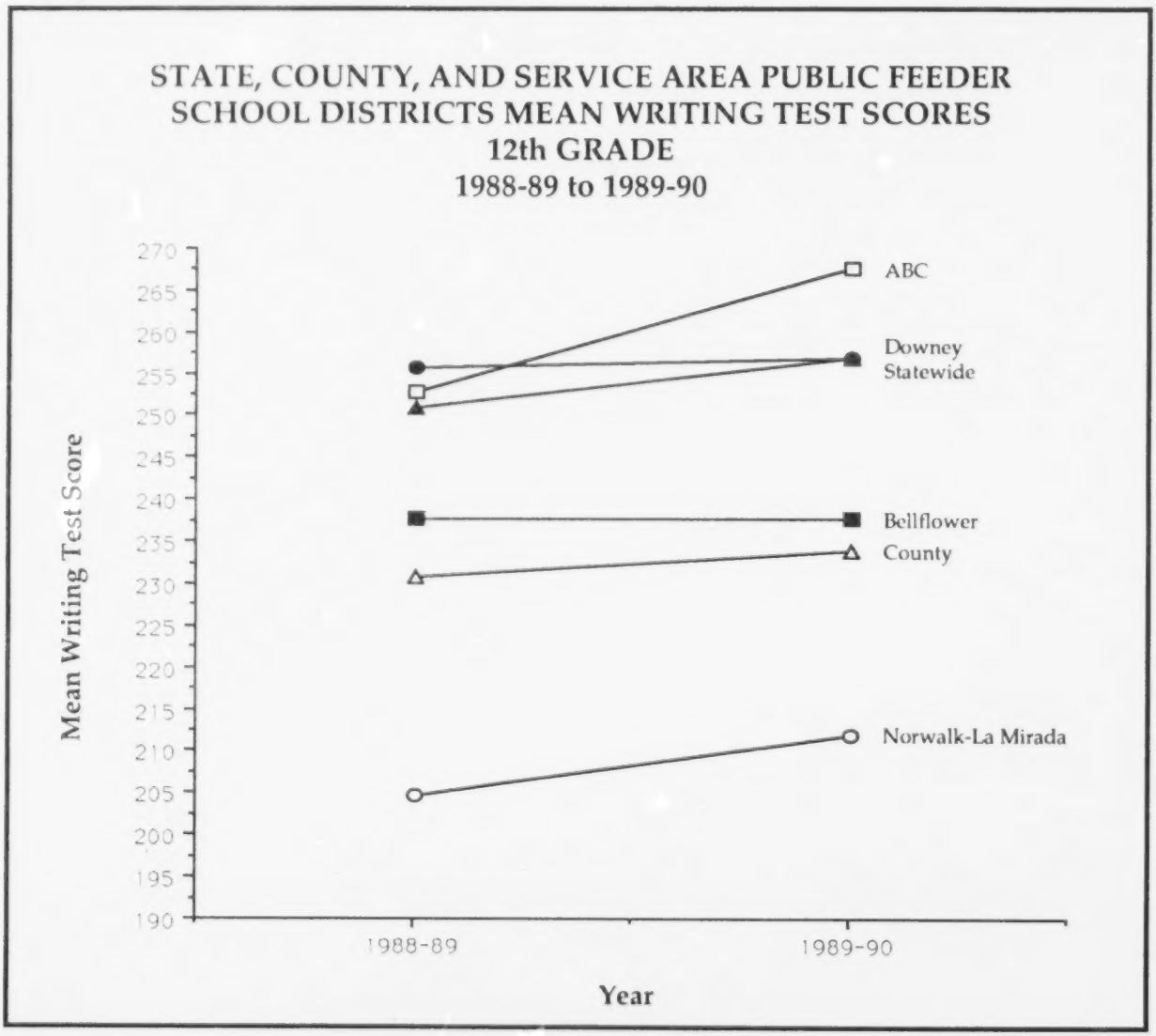


Figure 6 illustrates the change in mean CAP writing scores at the statewide, county, and public feeder school district level from 1988-89 to 1989-90. Unfortunately, due to more recent changes in the CAP direct writing test, consistent data is available for only the two previous academic years. The statewide mean direct writing score exceeded county and all four public feeder school district test scores in 1988-89. Test score improvement in the ABC and Downey USDs brought 1989-90 mean direct writing test scores above or equal to the statewide mean direct writing test score. In 1989-90, ABC USD ranked at the 63rd percentile; Downey USD at the 50th. While county, Bellflower USD, and Norwalk-La Mirada USD mean direct writing scores were still below the statewide mean test score, 1989-90 scores showed improvement. In 1989-90, Bellflower USD ranked at the 35th statewide percentile; Norwalk-La Mirada ranked at the 17th percentile. The Los Angeles County mean direct writing test score was again consistently below the statewide mean, ranging from 20-23 points lower.

Figure 6



In addition to the young, recent high-school graduate population entering Cerritos College, the reading, writing, and math competencies of students beyond the traditional college age group must be examined. The data available to indicate academic readiness for these students comes from the College's placement test battery. Again, this data must be examined with caution. Many of the same caveats that apply to CAP data apply to Cerritos College placement test data. Especially relevant to any discussion of placement test data are the state-mandated guidelines requiring the use of multiple measures and standardized testing validation. While Cerritos College is diligently working towards meeting guidelines that will provide a wealth of information about academic readiness and predictors of academic success, data currently available on student's academic readiness is limited by the existing placement data.

Table 3 below displays the mean reading, writing, and mathematics assessment test scores of Cerritos College students by age group. Regardless of age, a decline in mean placement score is apparent in reading, writing, and math from Fall 1985 to Fall 1990.

Table 3

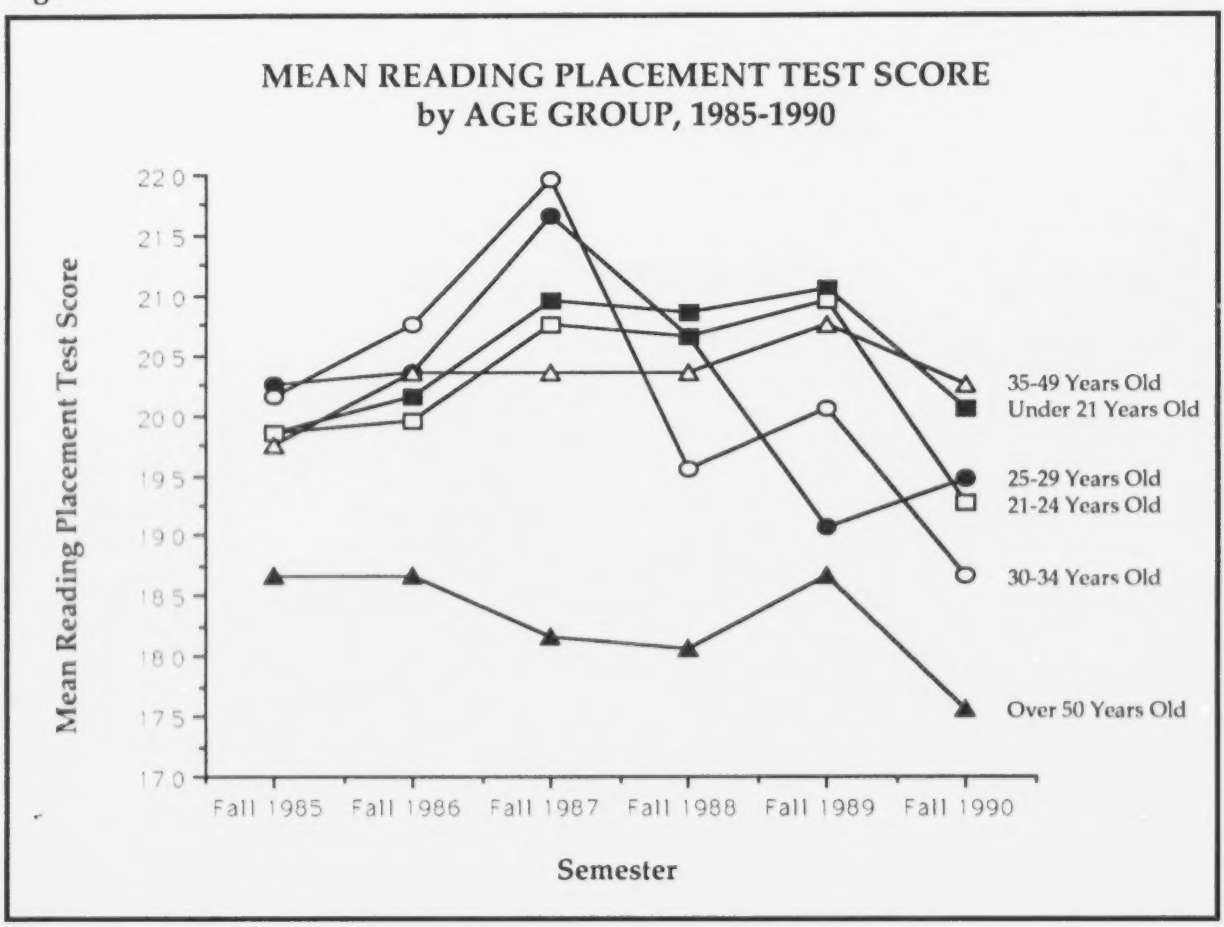
MEAN READING, WRITING, AND MATHEMATICS ASSESSMENT TEST SCORE by AGE GROUP 1985-1990

AGE GROUP	FALL 1985	FALL 1986	FALL 1987	FALL 1988	FALL 1989	FALL 1990
READING						
Under 21 Years Old	19.8	20.1	20.9	20.8	21.0	20.0
21-24 Years Old	19.8	19.9	20.7	20.6	20.9	19.2
25-29 Years Old	20.2	20.3	21.6	20.6	19.0	19.4
30-34 Years Old	20.1	20.7	21.9	19.5	20.0	18.6
35-49 Years Old	19.7	20.3	20.3	20.3	20.7	20.2
Over 50 Years Old	18.6	18.6	18.1	18.0	18.6	17.5
WRITING						
Under 21 Years Old	51.0	50.7	52.0	51.1	50.5	49.2
21-24 Years Old	49.6	49.6	49.0	47.7	49.2	45.5
25-29 Years Old	49.4	48.9	48.4	47.5	43.7	43.9
30-34 Years Old	49.3	49.6	49.4	46.2	47.9	45.0
35-49 Years Old	49.9	50.1	48.5	48.7	47.5	48.0
Over 50 Years Old	48.3	47.4	48.7	46.7	43.7	44.3
MATH						
Under 21 Years Old	26.6	26.7	26.8	26.4	26.5	25.8
21-24 Years Old	26.1	26.5	26.0	24.8	25.6	24.2
25-29 Years Old	26.0	25.8	25.2	24.4	24.1	23.0
30-34 Years Old	26.0	25.7	26.8	26.7	24.4	22.4
35-49 Years Old	26.3	26.0	25.7	25.1	24.7	23.7
Over 50 Years Old	24.8	24.8	24.6	27.6	25.2	22.3

To further analyze these declining trends, the following three figures are presented to examine reading, writing, and mathematics independently. Figure 7 depicts the change in mean reading placement test score by age group from Fall 1985 to Fall 1990. Test scores on the reading placement test (Nelson-Denny Reading Test) range from a low of 0 to a high of 36.

Students with a score of 21 or higher are usually given reading clearance (no reading instruction necessary), while students who score between 17 and 20 are usually recommended to take Reading 54 (Developmental Reading). Students scoring 16 or less are usually recommended to enroll in Reading 53 (Basic Reading Skills) in order to improve basic reading

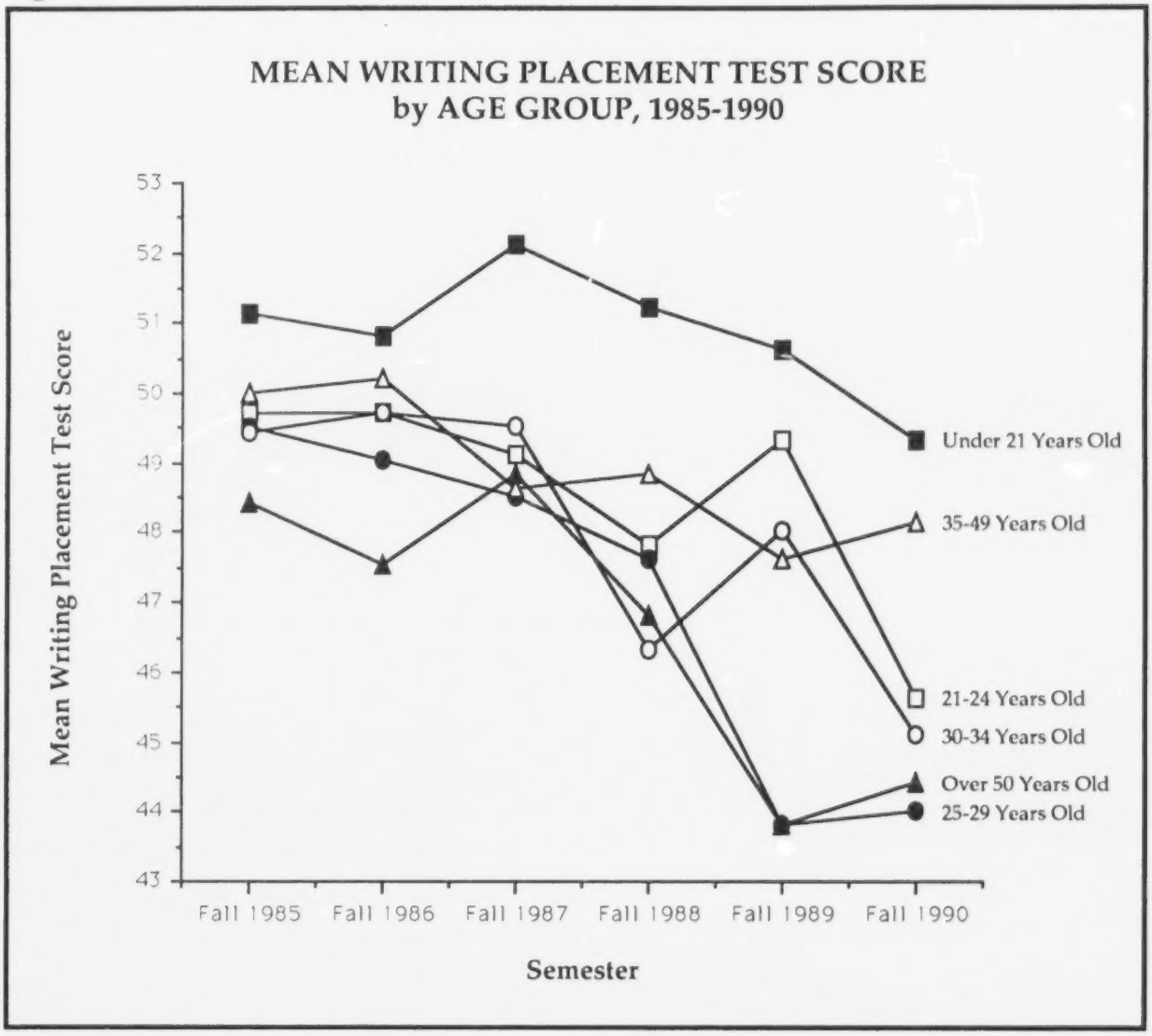
Figure 7



skills. As Figure 7 and Table 3 illustrate, mean reading placement scores are declining among most of the age groups.

Figure 8 shows the change in mean writing placement test score by age group from Fall 1985 through Fall 1990. Test scores on the College English Placement Test (CEPT) range from a low of 0 to a high of 106. Students who score 61 or above usually receive English clearance and are recommended to enroll in English 1 (Freshman Composition). Students who score between 46 and 60 usually recommended to enroll in English 50.2 (Introduction to Composition), a course designed to guide students through the writing process as a means of developing correct and effective expression. Students who earn a score between 31 and 45 on the CEPT are usually recommended to take English 50.1 (Basic Writing), a course designed to introduce students to the writing process. Any student scoring 30 or less on his or her English placement test is usually advised to enroll in an English as a Second Language (ESL) or Adult Education course.

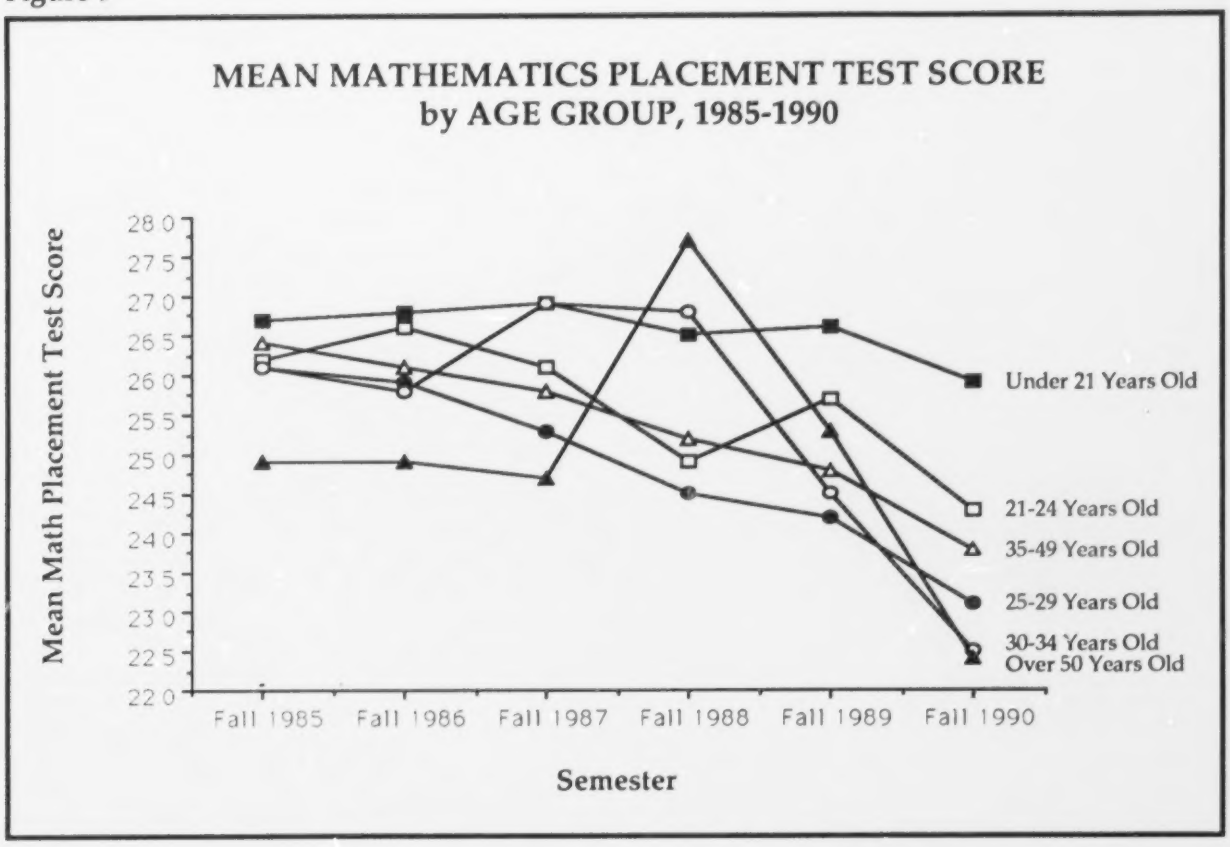
Figure 8



As Figure 8 indicates, over the past six years English placement test scores have been declining, again regardless of age.

Figure 9 displays the change in mean mathematics placement score by age group from Fall 1985 to Fall 1990. Test scores on the mathematics placement test (a home-grown mathematics test developed by the mathematics department) range from a low of 0 to a high of 35. Students who score 28 or higher are usually receive basic math clearance. Students scoring between 21 and 27 on the mathematics placement test are usually recommended to enroll in Mathematics 40 (Survey of Mathematics) in order to cover topics in mathematics that are needed by students who graduate from a Community College. Students scoring 20 or lower are often recommended to enroll in Mathematics 50 (Basic Mathematics), a course that provides a review of mathematics skills and fundamental operations. As Figure 9 indicates, mathematics placement test scores have declined across all age groups.

Figure 9



Conclusions:

- Students attending Cerritos College, on the whole, are slightly older than years ago.
- Students come more frequently from out of the District where preparation is lower than in most of our public feeder school districts.
- Incoming students appear to be less prepared in reading, mathematics, and writing.

Sources: California Assessment Program (CAP), "1989-90 Direct Writing Assessment Test Score Summary," California State Department of Education.
California Assessment Program (CAP) , "1989-90 Four Year School and District Summary," California State Department of Education.
California Assessment Program (CAP), "1989-90 Survey of Academic Skills: Grade 12," California State Department of Education.
California Basic Educational Data System (CBEDS) 1984 - 1990, California State Department of Education.
Cerritos College Computer Services AR810-R STAT Reports, Fall 1984 - Fall 1990.
Cerritos College Computer Services Program CTYCNT
Cerritos College Matriculation databases, Files IR101B.843 thru IR101B.911.